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In the Specification:

[0016] Further individual embodiments of this invention are:

- a) An article molded from a composition of any of ~~claims 1-52~~ (as set forth in this application as filed): a1)-a52).
- a1) A molding composition which comprises a blend formed from at least the following components: (A) a thermoplastic polyamide or thermoplastic polyester polymer, said polymer being unreinforced, reinforced, or filled, (B) at least one organic halogen-containing flame retardant, (C) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide, or a mixture of any two or more of the foregoing; and (D) an olefin-based polymer.
- a2) A composition of a1) wherein (A) is nylon 6 or nylon 6,6 and wherein (D) is a propylene-based polymer.
- a3) A composition of a1) wherein (B) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.
- a4) A composition of a1) wherein (B) is a polybromostyrenic polymer containing at least 58% by weight of bromine.
- a5) A composition of a1) wherein (B) is a polybromostyrenic polymer containing at least 65% by weight of bromine.
- a6) A composition of a1) wherein (C) is a dodecaboron tetrazine dicosaoxide hydrate.
- a7) A composition of a1) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a8) A composition of a1) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- a9) A composition of a8) wherein the anti-dripping agent is a polyfluoroethylene polymer.
- a10) A composition of a8) wherein the anti-dripping agent is an ethylene/methacrylic acid copolymer.
- a11) A composition of a1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.
- a12) A composition of a1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon predispersed in a polyamide or polyester resin.

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- a13) A composition of a11) wherein the organic polymer of silicon is a polysiloxane polymer.
- a14) A composition of a12) wherein the organic polymer of silicon is a polysiloxane polymer.
- a15) A composition of a13) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.
- a16) A composition of a14) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.
- a17) A composition of a2) wherein (B) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.
- a18) A composition of a2) wherein (B) is a polybromostyrenic polymer containing at least 58% by weight of bromine.
- a19) A composition of a2) wherein (B) is a polybromostyrenic polymer containing at least 65% by weight of bromine.
- a20) A composition of a2) wherein (C) is a dodecaboron tetrazinc docosaoxide hydrate.
- a21) A composition of a17) wherein (C) is a dodecaboron tetrazinc docosaoxide hydrate.
- a22) A composition of a18) wherein (C) is a dodecaboron tetrazinc docosaoxide hydrate.
- a23) A composition of a19) wherein (C) is a dodecaboron tetrazinc docosaoxide hydrate.
- a24) A composition of a2) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a25) A composition of a17) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a26) A composition of a18) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a27) A composition of a19) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a28) A composition of a20) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a29) A composition of a21) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- a30) A composition of a22) wherein (D) is a propylene homopolymer having a melt

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flow index of not more than about 5 grams/10 minutes.

a31) A composition of a23) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.

a32) A composition of a2) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a33) A composition of a17) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a34) A composition of a18) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a35) A composition of a19) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a36) A composition of a24) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a37) A composition of a25) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a38) A composition of a26) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a39) A composition of a27) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

a40) A composition of a33) wherein the anti-dripping agent is a polyfluoroethylene polymer.

a41) A composition of a35) wherein the anti-dripping agent is a polyfluoroethylene polymer.

a42) A composition of a33) wherein the anti-dripping agent is an ethylene/methacrylic acid copolymer.

a43) A composition of a35) wherein the anti-dripping agent is an ethylene/methacrylic acid copolymer.

a44) A composition of a2) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.

a45) A composition of a25) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.

a46) A composition of a27) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of

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silicon absorbed on fumed silica.

a47) A composition of a44) wherein the organic polymer of silicon is a polysiloxane polymer.

a48) A composition of a45) wherein the organic polymer of silicon is a polysiloxane polymer.

a49) A composition of a46) wherein the organic polymer of silicon is a polysiloxane polymer.

a50) A composition of a47) wherein the polysiloxane polymer is a poly(dimethylsiloxane) polymer.

a51) A composition of a48) wherein the polysiloxane polymer is a poly(dimethylsiloxane) polymer.

a52) A composition of a49) wherein the polysiloxane polymer is a poly(dimethylsiloxane) polymer.

b) An article of a) wherein the article contains glass fiber or a mineral filler, or both.

c) A method of increasing the flame retardancy and comparative tracking index of a thermoplastic polyamide or a thermoplastic polyester, which method comprises blending with the polyamide or polyester at least the components of any of claims 1-44 (as set forth in this application as filed) c1)-c44) to form a molding composition.

c1) A molding composition which comprises a blend formed from at least the following components: (A) a thermoplastic polyamide or thermoplastic polyester polymer, said polymer being unreinforced, reinforced, or filled, (B) at least one organic halogen-containing flame retardant, (C) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide, or a mixture of any two or more of the foregoing; and (D) an olefin-based polymer.

c2) A composition of c1) wherein (A) is nylon 6 or nylon 6,6 and wherein (D) is a propylene-based polymer.

c3) A composition of c1) wherein (B) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.

c4) A composition of c1) wherein (B) is a polybromostyrenic polymer containing at least 58% by weight of bromine.

c5) A composition of c1) wherein (B) is a polybromostyrenic polymer containing at least 65% by weight of bromine.

c6) A composition of c1) wherein (C) is a dodecaboron tetrazinc docosaoxide hydrate.

c7) A composition of c1) wherein (D) is a propylene homopolymer having a melt

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flow index of not more than about 5 grams/10 minutes.

c8) A composition of c1) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

c9) A composition of c8) wherein the anti-dripping agent is a polyfluoroethylene polymer.

c10) A composition of c8) wherein the anti-dripping agent is an ethylene/methacrylic acid copolymer.

c11) A composition of c1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.

c12) A composition of c1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon predispersed in a polyamide or polyester resin.

c13) A composition of c11) wherein the organic polymer of silicon is a polysiloxane polymer.

c14) A composition of c12) wherein the organic polymer of silicon is a polysiloxane polymer.

c15) A composition of c13) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.

c16) A composition of c14) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.

c17) A composition of c2) wherein (B) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.

c18) A composition of c2) wherein (B) is a polybromostyrenic polymer containing at least 58% by weight of bromine.

c19) A composition of c2) wherein (B) is a polybromostyrenic polymer containing at least 65% by weight of bromine.

c20) A composition of c2) wherein (C) is a dodecaboron tetrazine docosaoxide hydrate.

c21) A composition of c17) wherein (C) is a dodecaboron tetrazine docosaoxide hydrate.

c22) A composition of c18) wherein (C) is a dodecaboron tetrazine docosaoxide hydrate.

c23) A composition of c19) wherein (C) is a dodecaboron tetrazine docosaoxide hydrate.

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- c24) A composition of c2) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c25) A composition of c17) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c26) A composition of c18) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c27) A composition of c19) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c28) A composition of c20) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c29) A composition of c21) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c30) A composition of c22) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c31) A composition of c23) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.
- c32) A composition of c2) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c33) A composition of c17) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c34) A composition of c18) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c35) A composition of c19) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c36) A composition of c24) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c37) A composition of c25) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c38) A composition of c26) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c39) A composition of c27) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.
- c40) A composition of c33) wherein the anti-dripping agent is a polyfluoroethylene polymer.
- c41) A composition of c35) wherein the anti-dripping agent is a polyfluoroethylene

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polymer.

c42) A composition of c33) wherein the anti-dripping agent is an ethylene/meth-acrylic acid copolymer.

c43) A composition of c35) wherein the anti-dripping agent is an ethylene/meth-acrylic acid copolymer.

c44) A composition of c2) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.

d) A method of c) further comprising molding said molding composition while in molten condition.

e) A method of d) further comprising performing said molding with glass fiber or mineral filler, or both, included in the molten composition.

f) A method of producing a polyamide article or a polyester article having increased flame retardancy and comparative tracking index, which method comprises molding a melt blend of any of claims 1-16 (as set forth in this application as filed): f1)-f16).

f1) A molding composition which comprises a blend formed from at least the following components: (A) a thermoplastic polyamide or thermoplastic polyester polymer, said polymer being unreinforced, reinforced, or filled, (B) at least one organic halogen-containing flame retardant, (C) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide, or a mixture of any two or more of the foregoing; and (D) an olefin-based polymer.

f2) A composition of f1) wherein (A) is nylon 6 or nylon 6,6 and wherein (D) is a propylene-based polymer.

f3) A composition of f1) wherein (B) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.

f4) A composition of f1) wherein (B) is a polybromostyrenic polymer containing at least 58% by weight of bromine.

f5) A composition of f1) wherein (B) is a polybromostyrenic polymer containing at least 65% by weight of bromine.

f6) A composition of f1) wherein (C) is a dodecaboron tetrazine dodecaoxide hydrate.

f7) A composition of f1) wherein (D) is a propylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.

f8) A composition of f1) wherein the components used in forming said composition further include at least one polymeric anti-dripping agent.

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- f9) A composition of f8) wherein the anti-dripping agent is a polyfluoroethylene polymer.
- f10) A composition of f8) wherein the anti-dripping agent is an ethylene/methacrylic acid copolymer.
- f11) A composition of f1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon absorbed on fumed silica.
- f12) A composition of f1) wherein the components used in forming said composition further comprise a CTI-increasing amount of an organic polymer of silicon predispersed in a polyamide or polyester resin.
- f13) A composition of f11) wherein the organic polymer of silicon is a polysiloxane polymer.
- f14) A composition of f12) wherein the organic polymer of silicon is a polysiloxane polymer.
- f15) A composition of f13) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.
- f16) A composition of f14) wherein the polymer of silicon is a poly(dimethylsiloxane) polymer.
- g) A method of f) further comprising performing said molding with glass fiber or mineral filler, or both, included in the melt blend.
- h) An additive composition of any of ~~claims 64-67 (as set forth in this application as filed)~~ h1)-h4) wherein said polybromoaromatic compound is a polybromostyrenic polymer containing at least 58% by weight of bromine.
- h1) A flame retardant additive composition which comprises (i) at least one organic halogen-containing flame retardant, (ii) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide or any combination of any two or more of these, and (iii) an olefin-based polymer, in proportions of 0.5 to 40 parts by weight of (i) and 0.3 to 12 parts by weight of (ii) per part by weight of (iii), and wherein (i) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.
- h2) An additive composition of h1) further comprising (iv) up to 2 parts by weight of polymeric anti-dripping agent, (v) up to 3 parts by weight of an organic silicon-containing polymer used as the polymer absorbed on fumed silica, (vi) up to 5 parts by weight of organic silicon-containing polymer dispersed in a polyamide or polyester resin, and/or (vii) up to 10 parts by weight of processing, stabilizing, impact strength, and/or compatibilizing additives per part by weight of the olefin-based polymer



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present therein, at least one of (iv)-(vii) being present in said additive composition, and wherein (i) is at least one polybromoaromatic compound containing at least 50% by weight of bromine.

h3) A flame retardant additive composition which comprises (i) at least one organic halogen-containing flame retardant, (ii) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide or any combination of any two or more of these, and (iii) an olefin-based polymer, in proportions of 0.5 to 40 parts by weight of (i) and 0.3 to 12 parts by weight of (ii) per part by weight of (iii), wherein (i) is at least one polybromoaromatic compound containing at least 50% by weight of bromine, and wherein (iii) is a polypropylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.

h4) An flame retardant additive composition which comprises (i) at least one organic halogen-containing flame retardant, (ii) a zinc borate, a mixed oxide of zinc and boron, or zinc sulfide or any combination of any two or more of these, and (iii) an olefin-based polymer, in proportions of 0.5 to 40 parts by weight of (i) and 0.3 to 12 parts by weight of (ii) per part by weight of (iii), and further comprising (iv) up to 2 parts by weight of polymeric anti-dripping agent, (v) up to 3 parts by weight of an organic silicon-containing polymer used as the polymer absorbed on fumed silica, (vi) up to 5 parts by weight of organic silicon-containing polymer dispersed in a polyamide or polyester resin, and/or (vii) up to 10 parts by weight of processing, stabilizing, impact strength, and/or compatibilizing additives per part by weight of the olefin-based polymer present therein, at least one of (iv)-(vii) being present in said additive composition; wherein (i) is at least one polybromoaromatic compound containing at least 50% by weight of bromine, and wherein (iii) is a polypropylene homopolymer having a melt flow index of not more than about 5 grams/10 minutes.

- i) An additive composition of b) wherein said polybromostyrenic polymer contains at least 65% by weight of bromine, and wherein (ii) is a dodecaboron tetrazinc dicosaoxide hydrate.

Additional embodiments, features, and advantages of this invention will become still further apparent from the ensuing description and appended claims.